CS403: Lab assignment no. 2

Implement a binary search tree and perform the following operations:

(a) Inorder traversal
(b) Preorder traversal
(c) Postorder traversal
(d) Search

The input to the tree is only integers.
Read the input from an ascii text file, with one integer per line.
Check the program for inputs of fairly large size (eg. 1000 elements)
You can generate the inputs using a python script.
The program should accept the input file and the search element as command line arguments.

Example usage:

```
$ bst infile.txt
```

This will print the three traversals into stdout for the contents of infile.txt. You can provide additional command line arguments for printing specific traversals.

```
$ bst infile.txt 15
```

This will create the tree using the contents of infile.txt, search for the element 15 and print either 'yes' or 'no'.

Extra credit: Implement automatic checking of your program. One possible way to do it is to read in a given input, print the traversals, and check the traversals against a *manually provided key.* This can be done using, for example, a python script. Another way is to check if the inorder traversal produces sorted output; this does not require a manual key (and hence can be tried for large inputs.)